

Appl. No. 10/038,170
Atty. Docket No. 6768CD
Amdt. dated February 17, 2004
Reply to Office Action of November 17, 2003
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9 (canceled)

10. (currently amended) An alkylaryl composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises at least two isomers of an alkylaryl of the formula:



wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

R' is selected from H and C₁ to C₃ alkyl;

R'' is selected from H and C₁ to C₃ alkyl;

both R' and R'' are nonterminally attached to L and at least one of R' and R'' is C₁ to C₃ alkyl;

R''' is selected from H and C₁ to C₃ alkyl; and

A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof;

wherein:

said alkylaryl composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to L;

in at least about 60% of said alkylaryl composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

Appl. No. 10/038,170
 Atty. Docket No. 6768CD
 Amdt. dated February 17, 2004
 Reply to Office Action of November 17, 2003
 Customer No. 27752

wherein further said alkylaryl composition has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present.

11. (canceled)

12. (canceled)

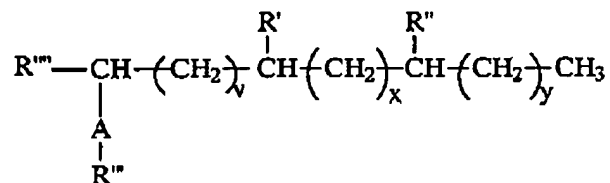
13. (currently amended) The ~~alkylaryl~~ composition according to Claim 2 wherein A is benzene.

14. (currently amended) The ~~alkylaryl~~ composition according to Claim 2 wherein A is toluene.

15. (currently amended) The ~~alkylaryl~~ composition according to Claim 1 wherein one of R' and R'' is methyl or ethyl.

16. (currently amended) The ~~alkylaryl~~ composition according to Claim 1 wherein one of R' and R'' is methyl.

17. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises at least two isomers, counted exclusive of ortho-, meta-, para-, and stereoisomers, of an ~~alkylaryl~~ of the formula:



wherein A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof; R''' is selected from H and C₁ to C₃ alkyl; R' is selected from hydrogen and C₁ to C₃ alkyl; R'' is selected from hydrogen and C₁ to C₃ alkyl;

Appl. No. 10/038,170
 Atty. Docket No. 6768CD
 Amdt. dated February 17, 2004
 Reply to Office Action of November 17, 2003
 Customer No. 27752

and R''' is selected from hydrogen and C₁ to C₄ alkyl; v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10;

wherein:

the total number of carbon atoms attached to A is less than about 20;

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ of this formula;

at least one of R' and R'' is C₁ to C₃ alkyl; when R''' is C₁, the sum of v + x + y is at least 1; and when R''' is H, the sum of v + x + y is at least 2; and

in at least about 60% of said alkylaryl composition, A is attached to the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof;

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃

of at least about 10:1 by weight, when said quaternary carbon atoms are present.

18. (canceled)

19. (canceled)

20. (currently amended) The ~~alkylaryl~~ composition according to Claim 8 wherein A is benzene.

21. (currently amended) The ~~alkylaryl~~ composition according to Claim 8 wherein A is toluene.

22. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein one of R' and R'' is methyl or ethyl.

23. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein one of R' and R'' is methyl.

Appl. No. 10/038,170
 Atty. Docket No. 6768CD
 Amdt. dated February 17, 2004
 Reply to Office Action of November 17, 2003
 Customer No. 27752

24. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to $R'''-CH(CH_2)_yCH(CH_2)_xCH(CH_2)_y-CH_3$ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.

25. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein R''' is hydrogen, methyl or ethyl.

26. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises:

a) from about 0.01% to about 99.99% by weight of an ~~alkylaryl~~ composition comprising at least two isomers of an ~~alkylaryl~~ of the formula:



wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

R' is selected from H and C_1 to C_3 alkyl;

R'' is selected from H and C_1 to C_3 alkyl;

both R' and R'' are nonterminally attached to L and at least one of R' and R'' is C_1 to C_3 alkyl;

R''' is selected from H and C_1 to C_3 alkyl; and

A is ~~[[aryl]]~~ an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof;

wherein:

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of R' , R'' and A to L;

in at least about 60% of said ~~alkylaryl~~ composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

Appl. No. 10/038,170
Atty. Docket No. 6768CD
Amdt. dated February 17, 2004
Reply to Office Action of November 17, 2003
Customer No. 27752

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

b) from about 0.01% to about 99.99% by weight of at least one isomer of the linear analog of said ~~alkylaryl~~ composition of (a).

27. (currently amended) The ~~alkylaryl~~ composition according to Claim 15 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.

28. (canceled)

29. (canceled)

30. (currently amended) The ~~alkylaryl~~ composition according to Claim 17 wherein A is benzene.

31. (currently amended) The ~~alkylaryl~~ composition according to Claim 17 wherein A is toluene.

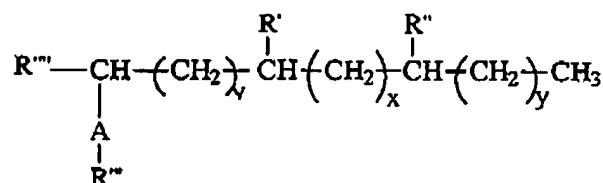
32. (currently amended) The ~~alkylaryl~~ composition according to Claim 15 wherein one of R' and R'' is methyl or ethyl.

33. (currently amended) The ~~alkylaryl~~ composition according to Claim 20 wherein one of R' and R'' is methyl.

34. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises:

a) from about 0.01% to about 99.99% by weight of an ~~alkylaryl~~ composition comprising at least two isomers, counted exclusive of ortho-, meta-, para- and stereoisomers, of an alkylaryl of the formula:

Appl. No. 10/038,170
 Atty. Docket No. 6768CD
 Amdt. dated February 17, 2004
 Reply to Office Action of November 17, 2003
 Customer No. 27752



wherein A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof; R''' is selected from H and C₁ to C₃ alkyl; R' is selected from hydrogen and C₁ to C₃ alkyl; R'' is selected from hydrogen and C₁ to C₃ alkyl; and R'''' is selected from hydrogen and C₁ to C₄ alkyl; v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10;

wherein:

the total number of carbon atoms attached to A is less than about 20;

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ of this formula;

at least one of R' and R'' is C₁ to C₃ alkyl; when R''' is C₁, the sum of v + x + y is at least 1; and when R''' is H, the sum of v + x + y is at least 2; and

in at least about 60% of said ~~alkylaryl~~ composition, A is attached to the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof;

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in the moiety

R'''-C(-)H(CH₂)_vC(-)H(CH₂)_xC(-)H(CH₂)_y-CH₃

of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

b) from about 0.01% to about 99.99% by weight of at least one isomer of the linear analog of said ~~alkylaryl composition~~ of (a).

35. (canceled)

36. (canceled)

Appl. No. 10/038,170
Atty. Docket No. 6768CD
Amdt. dated February 17, 2004
Reply to Office Action of November 17, 2003
Customer No. 27752

37. (currently amended) The ~~alkylaryl~~ composition according to Claim 23 wherein A is benzene.
38. (currently amended) The ~~alkylaryl~~ composition according to Claim 23 wherein A is toluene.
39. (currently amended) The ~~alkylaryl~~ composition according to Claim 22 wherein one of R' and R'' is methyl or ethyl.
40. (currently amended) The ~~alkylaryl~~ composition according to Claim 26 wherein one of R' and R'' is methyl.
41. (currently amended) The ~~alkylaryl~~ composition according to Claims 22 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to R'''-CH(CH₂)_yCH(CH₂)_xCH(CH₂)_y-CH₃ in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.
42. (currently amended) The ~~alkylaryl~~ composition according to Claim 22 wherein R''' is hydrogen, methyl or ethyl.